PRICE $5.00

POWER SUPPLY

VOLTAGE REGULATED
POWER SUPPLY

MODEL KR 6M

SERIAL NO. .....

INSTRUCTION MANUAL

kepco®

131-38 SANFORD AVENUE • FLUSHING, N. Y. 11352
Area Code 212 IN 1-7000 • TWX # 212-539-6623

SERIES CONNECTION

Kepco Voltage Regulated Power Supplies can be connected in series for increased voltage, provided the specified limits on the voltage to chassis are not exceeded. When series connected, supplies should be protected by means of a semiconductor diode, reverse-connected across the output terminals of each power supply. The peak reverse voltage (PRV) rating of this diode should be chosen to be at least as large as the voltage rating of the supply to which it is connected. The forward (continuous) current rating of the diode should be capable of carrying the largest short circuit current of the series inter-connected supplies.

INSTRUCTION MANUAL

VOLTAGE REGULATED POWER SUPPLY

MODEL KR 6M

SERIAL NO. .....

OFFICIAL RECORDS STATION
FILE COPY
FACILITIES

©KEPCO, INC. 1966

kepco inc. 131-38 SANFORD AVENUE • FLUSHING 52, N. Y. • Area Code 212 IN 1-7000 • TWX # NY 4-5196

STANDARD POLICY COVERING REPRODUCTION AND USE OF TECHNICAL DATA FOR KEPCO MANUFACTURED EQUIPMENT

The technical data submitted, including manuals, parts information, and mechanical and electrical drawings, is furnished solely for the purpose of effecting maintenance and/or repairs to the apparatus therein described and the purchaser or the Government shall not reproduce, use, or disclose the said technical data, in whole or in part, for any other purpose. Such technical data shall not be used for promotional procurement, development or manufacturing purposes, nor shall the purchaser or the Government permit the reproduction, use, or disclosure of any part of said technical data by others. The purchaser shall notify the Government of the purchaser's limited right in the use of said technical data for aforesaid purposes. In the event that any part of this technical data is used by anyone for other than the above authorized purposes, the purchaser will give all assistance possible for the prosecution of action against any unauthorized use thereof.

KEPCO, INC.
VOLTAGE REGULATED POWER SUPPLY MODEL KR 6M

SPECIFICATIONS AND DESCRIPTION

.... DC OUTPUT VOLTAGE: 195 to 325 volts, continuously adjustable.

.... DC OUTPUT CURRENT: 0 to 600 milliamperes.

.... AC OUTPUT:
VOLTAGE: Two 6.3 volts, unregulated, and isolated from chassis and DC output.
CURRENT: 10 amperes maximum each, may be operated in series or parallel. For series operation, 12.6 volts at 10 amperes, join terminals 5 to 6 and connect to 4 and 7. For parallel operation, 6.3 volts at 20 amperes, join terminals 4 to 6 and terminals 5 to 7 and connect to either pair.

.... AC INPUT REQUIREMENTS: 105-125 volts, 50-65 cps; 6.5 amperes.

.... DC REGULATION-
-LINE: Less than 0.4 volt for a $\pm$ 10 volts change in line voltage, at 115 volts, at any output voltage setting within the specified range of the Supply; (nominally 0.1% at maximum output voltage).

-LOAD: Less than 0.2 volt change for a change from a no-load to full-load, at any output voltage setting within the specified range of the Supply; (nominally 0.06% at maximum output voltage).

.... RIPPLE: Less than 0.003 volts rms at any output setting and load within the specified range.

.... OUTPUT IMPEDANCE:
Less than 0.35 ohm, DC to 100 cps.
Less than 0.06 ohm from 100 cps to 1 kc.
Less than 0.2 ohm + 2 μh from 1 kc to 100 kc.

.... STABILITY: DC output voltage variation over period of 8 hours at constant ambient temperature, is within regulation specification.

.... AMBIENT OPERATING TEMPERATURE: +55^{o}C maximum.

.... TEMPERATURE COEFFICIENT: Less than 0.01% per degree C.

.... DIMENSIONS: Height 10 1/2"; Width 19"; Depth 13" behind panel.

.... COLOR: Kepco Standard Gray Hammertone.

Digitized by the Internet Archive
in 2026

https://archive.org/details/manualsplus_12646

TERMINALS AND CONTROLS

....AC INPUT CONTROL. - AC input On-Off Switch, Fuse, and Pilot Light on front panel.

....DC OUTPUT CONTROL. - DC output On-Off Switch, Fuse, and Pilot Light on front panel.

....OUTPUT VOLTAGE CONTROL. - The DC Voltage Control is a locking screwdriver type adjustment, located either on the front panel or on the rear of the chassis, depending on the Model. On all but the KR 16, KR 17, KR 18, KR 19, it is located on the rear.

....OUTPUT TERMINALS. - All output terminations are on a labelled, barrier-type terminal strip located on the rear of the chassis.

....AC INPUT. - The unit is equipped with a three-wire safety grounding line-cord and polarized plug.

OPERATING INSTRUCTIONS

....INSTALLATION. - The Kepco KR Power Supply has been completely inspected and tested at the factory prior to packing, and is shipped with all tubes and components in place ready for operation.

....AC POWER. - The Supply is equipped with a three-wire safety line cord and polarized plug. The third (green) wire in the cord, connected to the grounding pin on the plug, is connected to the case and chassis. When using the two-prong receptacle adapter supplied with the line cord, the green pig-tail wire on the adapter must be connected to a suitable ground connection in order to ground the Supply.

....ISOLATION. - All output terminals, both DC and AC are isolated from the AC power line and from each other. They are also isolated from ground, permitting either side of the DC to be grounded.

....TURN-ON PROCEDURE. - Generally, the DC Switch should be in the OFF position when the AC power is first turned On. The tubes should be allowed to warm-up for 30 seconds before turning on the DC output. In those KR Models equipped with an input control relay, a thermal element provides an automatic time-delay to allow warm-up. After warm-up, the DC may be turned On and Off with the DC Switch, while the AC is left On in standby.

MAINTENANCE AND REPAIRS

....MAINTENANCE. - Under normal operating conditions no mechanical maintenance of any kind should be required; electrical service may only entail the checking of vacuum tubes and replacement if necessary.

....FACTORY REPAIRS. - If it becomes necessary or desirable to return the equipment to the manufacturer for repair, it should not be shipped to the factory without having prior authorization and shipping instructions. The inclusion of detailed information with the unit, or in correspondence prior to its return will greatly expedite completion of repairs and the return of the equipment to the sender. In any correspondence to the factory about this Power Supply, the Model and Serial numbers should always be included.

PARTS LIST - MODEL KR6, KR6M*

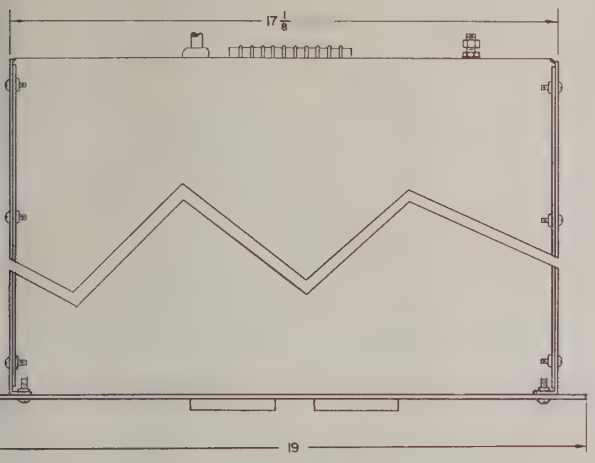
DRAWING S-KR6, KR6M-01

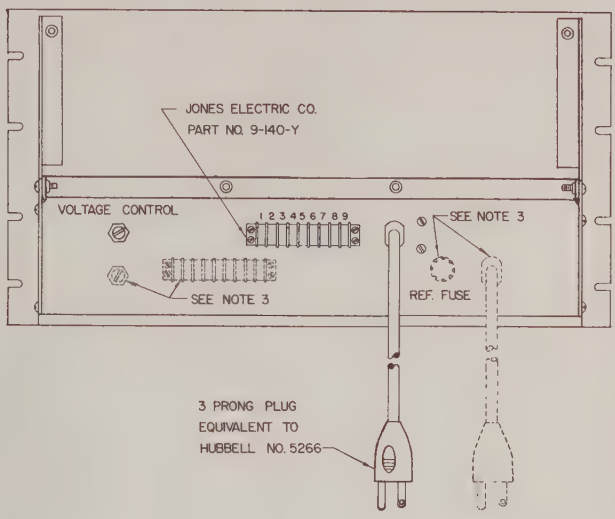
C1 thru C4	- 8	MF	1000 WV
C5 and C6	- Omitted		
C7	- 4	MF	1000 WV
C8	- 0.001	MF	2000 WV
C9 thru C11	- 0.1	MF	600 WV
C12	- 0.25	MF	600 WV
C13	- 500	MMF	2000 WV
C14	- 500	MMF	2000 WV
C15	- 22	MMF	2000 WV
C16	- 0.01	MF	2000 WV
F1	- 8 Amp. Fuse		
F2	- 3/4 Amp. Fuse		
*M1	- Milliammeter, 0-600 MA DC		
*M2	- Voltmeter, 0-500 V DC		
PL1	- Neon Pilot Light NE-51		
PL2	- Neon Pilot Light NE-51		
R1	- 250	K	2 watt Pot.
R2	- 30	K	10 watt WW
R3	- 50	K	10 watt WW
R4	- 100	K	20 watt WW
R5 thru R11	- 100	Ohm	1 watt
R12	- 1.2	Meg.	1 watt
R13 thru R19	- 100	Ohm	1 watt
R20 thru R26	- 47	Ohm	1 watt
R27	- 3.6	Meg.	1 watt
R28	- 1.2	Meg.	1 watt
R29	- 560	K	1 watt
R30	- 560	K	1 watt
R31	- 1.2	Meg.	1 watt
R32	- 3.6	Meg.	1 watt
R33	- 100	K	1 watt
R34	- 150	K	1 watt
R35	- 56	K	1 watt
R36	- 270	K	1 watt
R37	- 100	K	1 watt
R38	- 56	K	1 watt
R39	- 10	K	5 watt WW
R40	- 82	K	1 watt
R41	- 470	K	1 watt
RL1	- DPDT Relay		

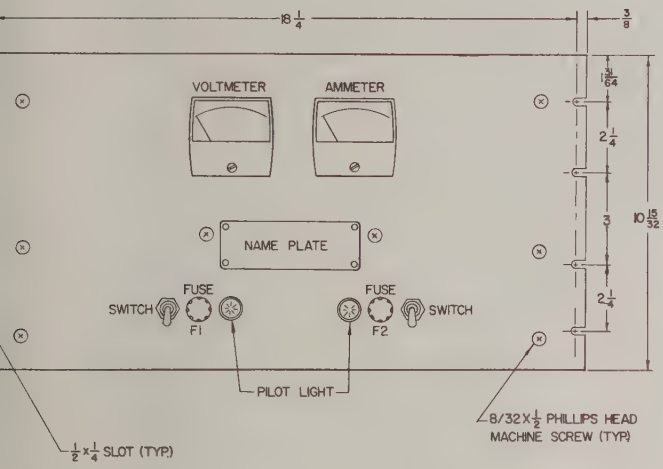
PARTS LIST - MODEL KR6, KR6M*

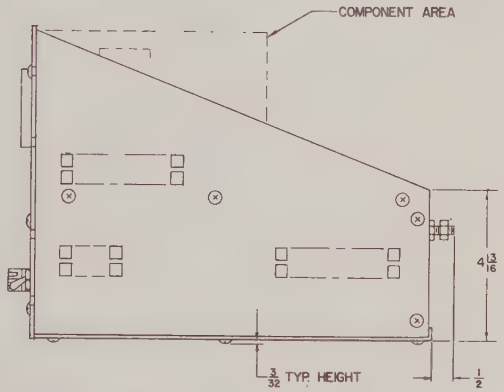
DRAWING S-KR6, KR6M-01

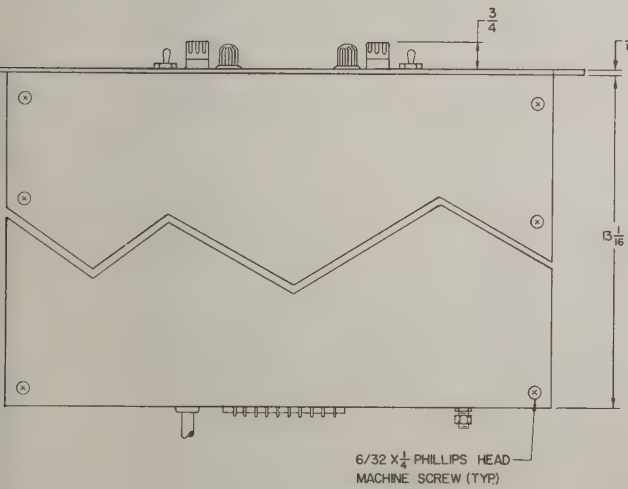
S1	- SPST Switch
S2	- SPST Switch
T1	- Kepco #100-558A
T2	- Kepco #100-595B
TD1	- 117-30-GO or 115 NO 30T
V1 thru V4	- 6550
V5	- 6U8
V6	- 12AX7
V7	- 85A2/OG3
V8 thru V10	- 6550
V11 thru V13	- 5U4GB











REAR OUTPUT TERMINAL FUNCTIONS:

1-MINUS OUTPUT DC
2-GROUND
3-POSITIVE OUTPUT DC
4- (2) 6.3 VAC AT 10 AMPERES
5- OR SERIES CONNECT FOR
6- 12.6 VAC AT 10 AMPERES
7- OR PARALLEL CONNECT FOR
6.3 VAC AT 20 AMPERES
8- SPARE
9- SPARE

NOTES:

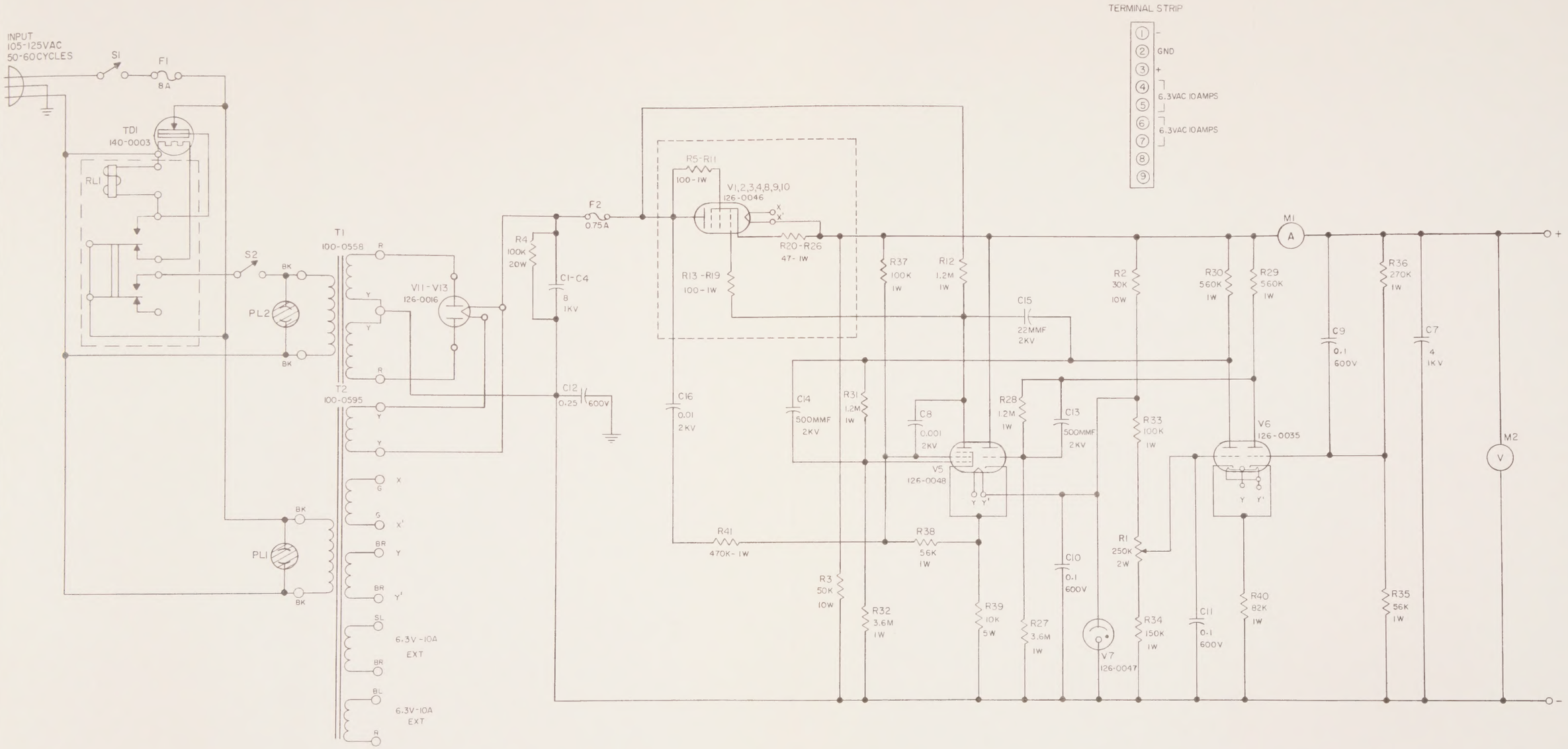
1. THIS DRAWING USED FOR MODELS KR 5M, KR 6M, KR 7M, KR 8M.
2. MAT'L: FRONT PANEL, 11 GAGE CRS, GREY HAMMERTONE FINISH. CHASSIS, SIDE BRACKETS & BOTTOM PLATE, 16 GAGE CRS, CADMIUM PLATED WITH A CHRONAK WASH.
3. A) FOR KR 8M ONLY, LINE CORD, VOLTAGE CONTROL AND BARRIER STRIP ARE SHOWN WITH DOTTED LINES.
   B) REF. FUSE ON REAR FLANGE IS FOUND ON MODEL KR 8M ONLY ITS VALUE IS 0.8A SLO-BLO.
4. FUSE DATA:

MODEL	FUSE F1	FUSE F2
KR 5M	8 A	0.75 A
KR 6M	8 A	0.75 A
KR 7M	8 A	0.75 A
KR 8M	8A	0.75A

5. REFER TO KEPCO CATALOG FOR DETAILED SPECIFICATIONS

KEPCO INC
FLUSHING, N.Y.
OUTLINE DRAWING
DRAWN L. REY | PAGE 2 | APPROVED | DATE 2-1-65
SEE NOTE 1 | SHEET 1
EM04736

DM03939



TERMINAL STRIP

1	-
2	GND
3	+
4	6.3VAC 10AMPS
5	
6	6.3VAC 10AMPS
7	
8	
9	

NOTES:

1. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
2. ALL RESISTOR VALUES IN OHMS. M(MEG)=1000000 K=1000.
3. OUTPUT: 195-325V 600MA
4. M1&M2 USED ON METERED UNITS ONLY.

KEPCO INC. FLUSHING, N.Y.			
TITLE: SCHEMATIC POWER SUPPLY			
DRAWN: H.S.V.	CHECKED:	APPROVED:	DATE: 3-27-64
MODEL NO.: KR-6, KR-6M		PART NO.:	SCALE:
DWG. NO.: DM03939			4

INSTRUCTION MANUAL ADDENDA

"Line Compensator" Adjustment. A variable 10-ohm filament balancing control has been added across the center tapped filament of V6 (12AX7). The control permits the relative voltage across the two halves of the filament to be adjusted to compensate for heater imbalance, which is inherent and varies in individual tubes. The added control, labelled "Line Compensator", is located on the chassis, near the 12AX7, (V6). It has been preset at the factory for optimum Line Regulation performance, and need not be readjusted except following replacement of V6.

Readjustment Procedure.

1. It is necessary to be able to observe the Line Regulation performance of the Supply.

2. After the replacement V6 has operated for one-half hour, measure and note the Line Regulation for a line change of 105-125 VAC, or 125-105 VAC.

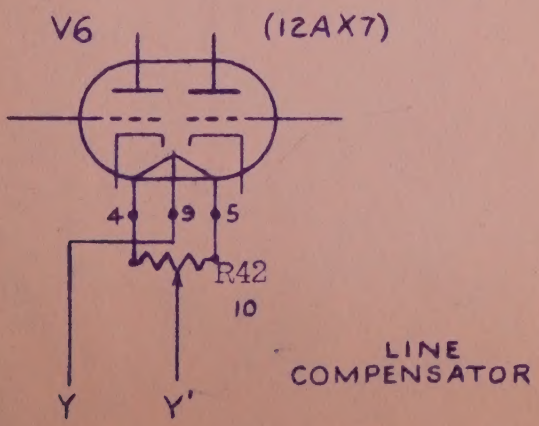
3. Determine in which direction turning the control improves Line Regulation, by turning the control a small increment in one direction and then measuring Regulation.

4. Continue adjusting the control in small increments, measuring Regulation after each, until Line Regulation is within rated performance specification.

Parts List Change:

1. Add Resistor, R42, 10 Ω, 4 W, WW, potentiometer.

Schematic Diagram Change:



131-38 SANFORD AVENUE • FLUSHING, N.Y. 11352 • Phone (212) IN 1-7000
TWX# 212-539-6623 • Cable Address: KEPCOPOWER NEWYORK

146-0045 12/65